

**Amendments to the Claims**

On page 18, please replace “CLAIMS” with --We Claim--.

This Listing of Claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-2 (Cancelled).

3. (New) A linear motion engine, comprising:

- a main body having at least one engine cylinder;
- a piston located within said at least one engine cylinder;
- a slider having a slot formed therein;
- a rod connecting said piston to said slider;
- a rotatable shaft extending from said main body;
- a crank connected to said rotatable shaft; and
- an eccentric shaft positioned for movement within the slot formed in

said slider, whereby movement of said slider and said piston is limited.

4. (New) The linear motion engine of claim 3, further comprising a guide rail attached to said main body and supporting said slider for movement thereon.

5. (New) The linear motion engine of claim 4, further comprising a flywheel attached to said rotatable shaft.

6. (New) The linear motion engine of claim 3, further comprising a fuel valve and an exhaust valve positioned adjacent a head of said at least one engine cylinder;

and

a timing gear for opening and closing said fuel valve and said exhaust valve.

7. (New) The linear motion engine of claim 6, wherein said rotatable shaft is rotatably fixed with bearings on a side of said main body.

8. (New) The linear motion engine of claim 3, wherein said eccentric shaft follows a rotational track substantially equal to a stroke length of said piston.

9. (New) The linear motion engine of claim 8, further comprising a guide rail attached to said main body and supporting said slider for movement thereon.

10. (New) A linear motion engine, comprising:

- a main body having at least two engine cylinders;
- a piston located within each of said at least two engine cylinders;
- a slider having a slot formed therein;
- a rod connecting said pistons to said slider;
- a rotatable shaft extending from said main body;
- a crank connected to said rotatable shaft; and
- an eccentric shaft positioned for movement within the slot formed in said slider, whereby movement of said slider and said pistons is limited.

11. (New) The linear motion engine of claim 10, further comprising a guide rail attached to said main body and supporting said slider for movement thereon.

12. (New) The linear motion engine of claim 11, wherein said eccentric shaft follows a rotational track substantially equal to a stroke length of said pistons.

13. (New) The linear motion engine of claim 12, further comprising a flywheel attached to said rotatable shaft.

14. (New) The linear motion engine of claim 13, wherein said rotatable shaft is rotatably fixed with bearings on a side of said main body.

15. (New) The linear motion engine of claim 10, further comprising a fuel valve and an exhaust valve positioned near a head of each of said at least two engine cylinders;

a timing gear for opening and closing said fuel valves and said exhaust valves; and

a guide rail attached to said main body and supporting said slider for movement thereon.

16. (New) A linear motion engine, comprising:

a main body having four engine cylinders;

a piston located within each of said four engine cylinders;

a slider having a slot formed therein;

rods linking said pistons to said slider;

a guide rail supporting said slider for movement thereon;

a rotatable shaft extending from said main body;

a crank connected to said rotatable shaft; and

an eccentric shaft positioned for engaging the slot formed in said slider for limiting movement of said slider and said pistons.

17. (New) The linear motion engine of claim 16, wherein said eccentric shaft follows a rotational track substantially equal to a stroke length of said pistons.

18. (New) The linear motion engine of claim 16, further comprising a flywheel attached to said rotatable shaft.

19. (New) The linear motion engine of claim 16, wherein said guide rail forms a portion of said main body.

20. (New) The linear motion engine of claim 16, further comprising a fuel valve and an exhaust valve positioned near a head of each of said at least four engine cylinders; and

a timing gear for opening and closing said fuel valves and said exhaust valves.

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs. 5a-5d. These sheets replace the original sheets containing Figs. 5a-5d. Specifically, the drawings are amended to include omitted reference characters (u) and (d). Moreover, changes are made to Fig. 5b to correct reference characters S<sub>1</sub>-S<sub>4</sub> and P<sub>1</sub>-P<sub>4</sub>.

Attachment: Two replacement sheets